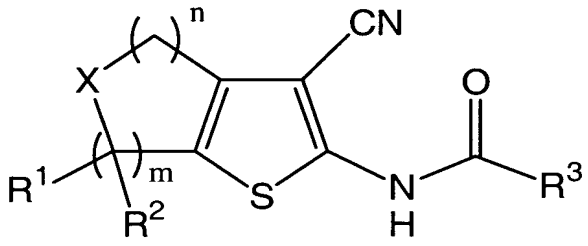
AMENDMENTS TO THE CLAIMS

Please cancel Claims 19 and 20. This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims

1. (original) A method of treating type 2 diabetes mellitus in a mammalian patient in need of such treatment, which comprises administering to said patient an anti-diabetic effective amount of a compound represented by formula I:



or a pharmaceutically acceptable salt or solvate thereof wherein:

X is CR^5R^6;

at least one of R^1, R^2, R^5 and R^6 is present that is other than H;

R^1 is selected from the group consisting of: H, C_{1-10}alkyl, C_{3-7}cycloalkyl and Aryl, said alkyl, cycloalkyl and Aryl being optionally substituted with 1-4 substituents independently selected from R^{13};

R^2 is selected from the group consisting of: R^1 as defined above, $-C(O)_2R^7$ and $-CONR^7R^8$;

m and n are selected from 0, 1, 2 and 3, such that the sum of m and n is 2 or 3, and when m is greater than 1, no more than one R^1 and no more than one R^2 can be other than H;

R^3 is selected from the group consisting of: C_{1-10}alkyl, C_{3-7}cycloalkyl and Aryl, said alkyl, cycloalkyl and Aryl being optionally substituted with 1-4 substituents selected from R^{13}, such that when R^3 represents C_{1-10} alkyl substituted with one R^{13} group, and R^{13} represents halo, R^1, R^2, R^5 and R^6 do not represent C_{1-3}alkyl;

R^5 is selected from the group consisting of: H, C_{1-10}alkyl, C_{3-7}cycloalkyl and Aryl, said alkyl, cycloalkyl and Aryl being optionally substituted with 1-4 substituents selected from R^{13};

R6 is selected from the group consisting of: R^1 as defined above, HAR, Hetcy, and OR^{11}, wherein said HAR and Hetcy being optionally substituted with 1-4 substituents selected

from R^{13},

or R^5 and R^6 can be taken in combination with the carbon atom to which they are attached and represent -O-$(CH_2)_{1-2}$-O- or -C(O)-;

R^7, R^{10} and R^{11} are selected from the group consisting of: R^1 as defined above, HAR and Hetcy, said HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{13};

R^8, R^9 and R^{12} are selected from the group consisting of: C_{1-10}alkyl, C_{3-7}cycloalkyl, Aryl, HAR and Hetcy, said alkyl, cycloalkyl, Aryl, HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{13};

or alternatively, R^7, R^8, R^9 and R^{10} are as defined above, and R^{11} and R^{12} are taken together with the atoms to which they are attached and form a 5-8 membered ring optionally containing 1-2 heteroatoms selected from O, S and N, and optionally substituted with 1-4 substituents selected from R^{13};

each R^{13} is selected from the group consisting of: halo, $NR^{14}R^{15}$, C_{1-4}alkyl, C_{3-7}-cycloalkyl, Aryl, HAR, Hetcy, CF_3, OCF_3, OR^{15}, NO_2, $S(O)_xR^{14}$, SR^{14}, $S(O)_xNR^{14}R^{15}$, $O(CR^{16}R^{17})_yNR^{14}R^{15}$, $C(O)R^{14}$, CO_2R^{15}, $CO_2(CR^{16}R^{17})_yCONR^{14}R^{15}$, $OC(O)R^{14}$, CN, $C(O)NR^{14}R^{15}$, $NR^{15}C(O)R^{14}$, $NR^{15}C(O)OR^{14}$, $NR^{15}C(O)NR^{16}R^{14}$ and $CR^{15}(N\text{-}OR^{14})$,

wherein x is 1 or 2, and y is an integer from 1-4,

said alkyl, cycloalkyl, Aryl, HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{18};

R^{14}, R^{15}, R^{16} and R^{17} are independently selected from the group consisting of: H, C_{1-10}alkyl, C_{3-7}cycloalkyl, Aryl and Ar-C_{1-10}alkyl;

and each R^{18} is independently selected from the group consisting of: halogen, CN, C_{1-4}alkyl, OH, CF_3, Aryl, Aryloxy, CO_2H and CO_2C_{1-4} alkyl, said Aryl and the Aryl portion of Aryloxy being optionally substituted with up to 4 halo groups, and up to 2 C_{1-4} alkyl, OH, CF_3 or CN groups.

2. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein R^1 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents independently selected from R^{13}.

3. (original) A method of treating type 2 diabetes mellitus in accordance with

claim 1 wherein R^2 is selected from the group consisting of: H, C_{1-6}alkyl, C_{3-6}cycloalkyl, Aryl and $C(O)NR^7R^8$, said alkyl, cycloalkyl and Aryl groups being optionally substituted with 1-3 substituents independently selected from R^{13};

R^7 is selected from the group consisting of: H and C_{1-6} alkyl, optionally substituted with 1-3 R^{13} groups;

R^8 is selected from the group consisting of: C_{1-6} alkyl, C_{3-6} cycloalkyl, and Aryl, optionally substituted with 1-3 R^{13} groups;

each R^{13} is independently selected from the group consisting of: halo, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are each independently selected from halo, CH_3, OH, CF_3 and CO_2H.

4. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein R^3 is selected from the group consisting of: C_{1-10}alkyl and C_{3-7}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}, such that when R^3 represents C_{1-10} alkyl substituted with one R^{13} group, and R^{13} represents halo, R^1, R^2, R^5 and R^6 do not represent C_{1-3}alkyl.

5. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein R^5 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}.

6. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein R^6 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}.

7. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein each R^{13} is selected from the group consisting of: halo, C_{1-4}alkyl, C_{3-6}cycloalkyl, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are independently selected from halo, CH_3, OH, CF_3 and CO_2H.

8. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein:

R^1 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents independently selected

from R^{13};

R^2 is selected from the group consisting of: H, C_{1-6}alkyl, C_{3-6}cycloalkyl, Aryl and $C(O)NR^7R^8$, said alkyl, cycloalkyl and Aryl groups being optionally substituted with 1-3 substituents independently selected from R^{13};

R^7 is selected from the group consisting of: H and C_{1-6} alkyl, optionally substituted with 1-3 R^{13} groups;

R^8 is selected from the group consisting of: C_{1-6} alkyl, C_{3-6} cycloalkyl, and Aryl, optionally substituted with 1-3 R^{13} groups;

each R^{13} is independently selected from the group consisting of: halo, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are each independently selected from halo, CH_3, OH, CF_3 and CO_2H;

R^3 is selected from the group consisting of: C_{1-10}alkyl and C_{3-7}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}, such that when R^3 represents C_{1-10} alkyl substituted with one R^{13} group, and R^{13} represents halo, R^1, R^2, R^5 and R^6 do not represent C_{1-3}alkyl;

R^5 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13};

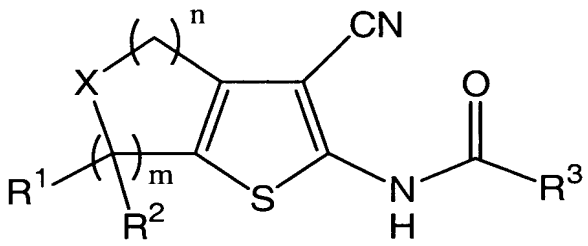
R^6 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}, and

each R^{13} is selected from the group consisting of: halo, C_{1-4}alkyl, C_{3-6}cycloalkyl, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are independently selected from halo, CH_3, OH, CF_3 and CO_2H.

9. (original) A method of treating type 2 diabetes mellitus in accordance with claim 1 wherein the compound administered is selected from the group consisting of:
N-(3-cyano-6-methyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-methylbutanamide;
N-(6-tert-butyl-3-cyano-4,5,6,7-tetrahydro-1-benzothien-2-yl)decanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)bicyclo[2.2.1]heptane-2-carboxamide;
N-(3-cyano-6-ethyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-phenylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-phenylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2,2,3,3-tetramethylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-cyclohexylpropanamide;

N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-phenylpropanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3,3-dimethylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-4,4,4-trifluoro-3-methylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2,2-dimethylpropanamide;
N-(6-tert-butyl-3-cyano-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-5,5,7,7-tetramethyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-5-tert-pentyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-6-tert-pentyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-4,6-dimethyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-7-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide; and
3-cyano-N-(2,4-dichlorobenzyl)-2-[(2-ethylbutanoyl)amino]-N-isopropyl-4,5,6,7-tetrahydro-1-benzothiophene-7-carboxamide.

10. (original) A pharmaceutical composition comprised of a compound represented by formula I:



or a pharmaceutically acceptable salt or solvate thereof in combination with a pharmaceutically acceptable carrier, wherein:

X is CR^5R^6;

at least one of R^1, R^2, R^5 and R^6 is present that is other than H;

R^1 is selected from the group consisting of: H, C_{1-10}alkyl, C_{3-7}cycloalkyl and Aryl, said alkyl, cycloalkyl and Aryl being optionally substituted with 1-4 substituents independently selected from R^{13};

R^2 is selected from the group consisting of: R^1 as defined above, $-C(O)_2R^7$ and $-CONR^7R^8$;

m and n are selected from 0, 1, 2 and 3, such that the sum of m and n is 2 or 3, and when m is greater than 1, no more than one R^1 and no more than one R^2 can be other than H;

R^3 is selected from the group consisting of: C_{1-10}alkyl, C_{3-7}cycloalkyl and Aryl, said alkyl, cycloalkyl and Aryl being optionally substituted with 1-4 substituents selected from

R^{13}, such that when R^3 represents C_{1-10} alkyl substituted with one R^{13} group, and R^{13} represents halo, R^1, R^2, R^5 and R^6 do not represent C_{1-3}alkyl;

R^5 is selected from the group consisting of: H, C_{1-10}alkyl, C_{3-7}cycloalkyl and Aryl, said alkyl, cycloalkyl and Aryl being optionally substituted with 1-4 substituents selected from R^{13};

R6 is selected from the group consisting of: R^1 as defined above, HAR, Hetcy, and OR^{11}, wherein said HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{13},

or R^5 and R^6 can be taken in combination with the carbon atom to which they are attached and represent -O-$(CH_2)_{1-2}$-O- or -C(O)-;

R^7, R^{10} and R^{11} are selected from the group consisting of: R^1 as defined above, HAR and Hetcy, said HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{13};

R^8, R^9 and R^{12} are selected from the group consisting of: C_{1-10}alkyl, C_{3-7}cycloalkyl, Aryl, HAR and Hetcy, said alkyl, cycloalkyl, Aryl, HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{13};

or alternatively, R^7, R^8, R^9 and R^{10} are as defined above, and R^{11} and R^{12} are taken together with the atoms to which they are attached and form a 5-8 membered ring optionally containing 1-2 heteroatoms selected from O, S and N, and optionally substituted with 1-4 substituents selected from R^{13};

each R^{13} is selected from the group consisting of: halo, $NR^{14}R^{15}$, C_{1-4}alkyl, C_{3-7}-cycloalkyl, Aryl, HAR, Hetcy, CF_3, OCF_3, OR^{15}, NO_2, $S(O)_xR^{14}$, SR^{14}, $S(O)_xNR^{14}R^{15}$, $O(CR^{16}R^{17})_yNR^{14}R^{15}$, $C(O)R^{14}$, CO_2R^{15}, $CO_2(CR^{16}R^{17})_yCONR^{14}R^{15}$, $OC(O)R^{14}$, CN, $C(O)NR^{14}R^{15}$, $NR^{15}C(O)R^{14}$, $NR^{15}C(O)OR^{14}$, $NR^{15}C(O)NR^{16}R^{14}$ and $CR^{15}(N\text{-}OR^{14})$,

wherein x is 1 or 2, and y is an integer from 1-4,

said alkyl, cycloalkyl, Aryl, HAR and Hetcy being optionally substituted with 1-4 substituents selected from R^{18};

R^{14}, R^{15}, R^{16} and R^{17} are independently selected from the group consisting of: H, C_{1-10}alkyl, C_{3-7}cycloalkyl, Aryl and Ar-C_{1-10}alkyl;

and each R^{18} is independently selected from the group consisting of: halogen, CN, C_{1-4}alkyl, OH, CF_3, Aryl, Aryloxy, CO_2H and CO_2C_{1-4} alkyl, said Aryl and the Aryl portion of Aryloxy being optionally substituted with up to 4 halo groups, and up to 2 C_{1-4} alkyl, OH, CF_3 or CN groups.

in combination with a pharmaceutically acceptable carrier.

11. (original) A pharmaceutical composition in accordance with claim 10 wherein: R^1 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents independently selected from R^{13}.

12. (original) A pharmaceutical composition in accordance with claim 10 wherein:

R^2 is selected from the group consisting of: H, C_{1-6}alkyl, C_{3-6}cycloalkyl, Aryl and $C(O)NR^7R^8$, said alkyl, cycloalkyl and Aryl groups being optionally substituted with 1-3 substituents independently selected from R^{13}; R^7 is selected from the group consisting of: H and C_{1-6} alkyl, optionally substituted with 1-3 R^{13} groups;

R^8 is selected from the group consisting of: C_{1-6} alkyl, C_{3-6} cycloalkyl, and Aryl, optionally substituted with 1-3 R^{13} groups;

each R^{13} is independently selected from the group consisting of: halo, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are each independently selected from halo, CH_3, OH, CF_3 and CO_2H.

13. (original) A pharmaceutical composition in accordance with claim 10 wherein R^3 is selected from the group consisting of: C_{1-10}alkyl and C_{3-7}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}, such that when R^3 represents C_{1-10} alkyl substituted with one R^{13} group, and R^{13} represents halo, R^1, R^2, R^5 and R^6 do not represent C_{1-3}alkyl.

14. (original) A pharmaceutical composition in accordance with claim 10 wherein R^5 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}.

15. (original) A pharmaceutical composition in accordance with claim 10 wherein R^6 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}.

16. (original) A pharmaceutical composition in accordance with claim 10

wherein each R^{13} is selected from the group consisting of: halo, C_{1-4}alkyl, C_{3-6}cycloalkyl, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are independently selected from halo, CH_3, OH, CF_3 and CO_2H.

17. (original) A pharmaceutical composition in accordance with claim 10 wherein:

R^1 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents independently selected from R^{13};

R^2 is selected from the group consisting of: H, C_{1-6}alkyl, C_{3-6}cycloalkyl, Aryl and $C(O)NR^7R^8$, said alkyl, cycloalkyl and Aryl groups being optionally substituted with 1-3 substituents independently selected from R^{13};

R^7 is selected from the group consisting of: H and C_{1-6} alkyl, optionally substituted with 1-3 R^{13} groups;

R^8 is selected from the group consisting of: C_{1-6} alkyl, C_{3-6} cycloalkyl, and Aryl, optionally substituted with 1-3 R^{13} groups;

each R^{13} is independently selected from the group consisting of: halo, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are each independently selected from halo, CH_3, OH, CF_3 and CO_2H;

R^3 is selected from the group consisting of: C_{1-10}alkyl and C_{3-7}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}, such that when R^3 represents C_{1-10} alkyl substituted with one R^{13} group, and R^{13} represents halo, R^1, R^2, R^5 and R^6 do not represent C_{1-3}alkyl;

R^5 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13};

R^6 is selected from the group consisting of: H, C_{1-6}alkyl and C_{3-6}cycloalkyl, said alkyl and cycloalkyl being optionally substituted with 1-3 substituents selected from R^{13}, and

each R^{13} is selected from the group consisting of: halo, C_{1-4}alkyl, C_{3-6}cycloalkyl, Aryl, CF_3 and OCF_3, and Aryl is optionally substituted with 1-3 R^{18} groups, which are independently selected from halo, CH_3, OH, CF_3 and CO_2H. Within this aspect of the invention, all other variables are as originally defined.

18. (original) A pharmaceutical composition in accordance with claim 10 wherein the compound of formula I is selected from the group consisting of:
N-(3-cyano-6-methyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;

N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-methylbutanamide;
N-(6-tert-butyl-3-cyano-4,5,6,7-tetrahydro-1-benzothien-2-yl)decanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)bicyclo[2.2.1]heptane-2-carboxamide;
N-(3-cyano-6-ethyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-phenylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-phenylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2,2,3,3-tetramethylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-cyclohexylpropanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-phenylpropanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3,3-dimethylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-4,4,4-trifluoro-3-methylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2,2-dimethylpropanamide;
N-(6-tert-butyl-3-cyano-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-5,5,7,7-tetramethyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-5-tert-pentyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-6-tert-pentyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-4,6-dimethyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-7-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide; and
3-cyano-N-(2,4-dichlorobenzyl)-2-[(2-ethylbutanoyl)amino]-N-isopropyl-4,5,6,7-tetrahydro-1-benzothiophene-7-carboxamide.

19. - 20. (cancelled)

21. A compound selected from the group consisting of:
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2,2,3,3-tetramethylcyclopropanecarboxamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-cyclohexylpropanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3-phenylpropanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-3,3-dimethylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-4,4,4-trifluoro-3-methylbutanamide;
N-(3-cyano-6-tert-pentyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2,2-dimethylpropanamide;
N-(6-tert-butyl-3-cyano-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)cyclopentanecarboxamide;
N-(3-cyano-6-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;
N-(3-cyano-5,5,7,7-tetramethyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide;

N-(3-cyano-5-tert-pentyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-6-tert-pentyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-4,6-dimethyl-5,6-dihydro-4H-cyclopenta[b]thien-2-yl)-2-ethylbutanamide;
N-(3-cyano-7-phenyl-4,5,6,7-tetrahydro-1-benzothien-2-yl)-2-ethylbutanamide; and
3-cyano-N-(2,4-dichlorobenzyl)-2-[(2-ethylbutanoyl)amino]-N-isopropyl-4,5,6,7-tetrahydro-1-benzothiophene-7-carboxamide, or a pharmaceutically acceptable salt or solvate thereof.